PRODUCT DATASHEET

BD4200W Series Dehydrators

Max Capacity 4200 SCFD (4955L/h), Output Pressure 5 to 20 PSI (34.5 to 138 KPa) or 0.3 to 10 PSI (2.1 to 69 KPa) Field Adjustable, Single Pressure Outlet, with Real-Time Remote Management

PRODUCT DESCRIPTION

The dehydrator removes the moisture from damp ambient air to deliver a reliable, constant, on-demand source of dry and pressurised air, which is critical to prevent the systems from performance and reliability degradation by condensation.

The BD4200W series dehydrators offer pressurization solutions to transmission lines and antennas in both telecom and broadcasting applications. Its low pressure models (suffix LP) are suitable for applications where reduced pressure is required, for example, pressurisation of broadcast antenna radomes, microwave waveguides and other transmission lines or broadcast STL systems.

The inherent reliability of the BD series design, combined with the high output capacity make these units an ideal choice for pressurisation of systems at unattended sites.

The BD4200W Series dehydrators employ a fully digital operating platform offering the most accurate readings of operating variables, either from the front panel or by a remote IP connection.

FEATURES / BENEFITS

- Air Delivery up to 4200 SCFD (4955L/h)
- Available in 110VAC or 220VAC Power Supply
- Accurate Humidity Sensing within ±0.1% RH
- Digital Display of All Operating Parameters
- Remote Real-Time Data and Alarm Reset Capabilities
- SNMP Communication Compatible
- Remote Access via Web Browser Interface
- Imperial and Metric Unit of Measure Options
- 8,000 Hour Maintenance Interval
- Quietest Dryer on the Market

DETAILS

Product Type		Automatic Dehydrator

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SPECIFICATIONS

		BD4200W	BD4200WLP	BD4202W	BD4202WLP
Output Capacity	l/hr (SCFD)	Normal: 3068 (2600) Continuous Maximum: 4955 (4200) Emergency			
Power Requirements		110 - 125 VAC, 50 / 60Hz (15 Amp service recommended)		208 - 253 VAC, 50 / 60Hz	
Operating Current	A	8.6		3.9	
Outlet Pressure Range	kPa (PSIG)	35 - 138 (5 - 20)	2.0 - 69 (0.30 - 10)	35 - 138 (5 - 20)	2.0 - 69 (0.30 - 10)
Outlet Air Relative Humidity		Less than 2% RH			
Compressor Type		Two-cylinder, 3/4 HP, Oil-less Type			
Dehydrating Method		Heatless Desiccant			
Environment Operating Temperature Range	°C (°F)	5°-30° (40°-85°) Ambient			
Noise Level at 3m (10ft)	dBA	63			
Heat Dissipation	kW (BTU/hr)	1.0 (3500)		0.85 (2900)	
Alarms		Low pressure, High pressure, Humidity, Excess run-tim, High duty circle, High internal temperature, and Maintenance reminder			
Outlet Connections		Single, 1/2" NPT female			
Dimensions Depth x Width x Height	cm (in)	53.3 x 64.8 x 124.5 (21 x 25.5 x 49)			
Weight	kg (lb)	100 (222)			
Network Management		via Web Browser or SNMP through RJ-45 Ethernet Connection			

ACCESSORIES

Kit Number		Description
GLK-1	[Note 1]	Gas Line and accessories kit for BD Series dehydrators
P012314		6 Month Maintenance Kit
P011471		8000 Hour Maintenance Kit

ADDITIONAL ACCESSORIES

Kit Number		Description
MLK-2	[Note 3]	2-Port Manifold Start-Up Kit
PWM2G		2-Port Manifold with Pressure Gauges
PWM2GC	[Note 2]	2-Port Manifold with Pressure Gauges & Check Valves
MLK-4	[Note 3]	4-Port Manifold Start-Up Kit
PWM4G		4-Port Manifold with Pressure Gauges
PWM4GC	[Note 2]	4-Port Manifold with Pressure Gauges & Check Valves
MLK-8	[Note 3]	8-Port Manifold Start-Up Kit
PWM8G		8-Port Manifold with Pressure Gauges
PWM8GC	[Note 2]	8-Port Manifold with Pressure Gauges & Check Valves
P8741SFM		Single Pipe Panel
P8741DFM		Dual Pipe Panel
PFMP2310		10-Line Flow Distribution Panel

Note:

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1. GLK-1 Kit contains fittings and valves of a single line 3/8" tubing system. It includes 1/8 NPT Gas inlet port for RF connector, Street Tee, Ball Valve, 0-15 PSI Gauge, 50' of 3/8" tube, Teflon tape and other valves, A 1/2" to 3/8" adaptor is also included for BD4200 and BD8400 series.
2. Manifold units with check valves are not recommended for pressurising antennas with dual feedlines.
3. MLK Kit works with corresponding PWM manifold to distribute gases to multiply lines through 3/8' tubing system.

For details of accessories, refer separate datasheet.

Screen image showing remote display of dehydrator status and alarms

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Dehydrator Sizing Chart	Model	BD210W Series	BD550W Series	BD1500W Series	BD4200W Series	BD8400W Series
Altitude (Feet)	Max Flow (SCFM)	0.14	0.38	1.04	2.92	5.83
Sea Level	Max Flow (SCFD)	200	550	1500	4200	8400
1.00	Max Volume (FT^3)	70	192	525	1469	2938
	Cross Area (FT^3 / FT)	Estimated Max Length of Line (FT)				
HCA38 | 3/8" Coaxial	0.0012	60,830	167,285	456,232	1,277,449	2,554,899
HCA12 | 1/2" Coaxial	0.0014	48,580	133,595	364,351	1,020,185	2,040,371
HCA58 | 5/8" Coaxial	0.0027	25,718	70,727	192,892	540,098	1,080,196
HCA78 | 7/8" Coaxial	0.0048	14,543	39,995	109,078	305,419	610,838
HCA118 | 1-1/8" Coaxial	0.0081	8,636	23,750	64,773	181,366	362,732
HCA158 | 1-5/8" Coaxial	0.0154	4,542	12,492	34,069	95,393	190,787
HCA214 | 2-1/4" Coaxial	0.0227	3,081	8,474	23,113	64,716	129,433
HCA300 | 3" Coaxial	0.0371	1,885	5,185	14,141	39,597	79,195
HCA400 | 4" Coaxial	0.0516	1,355	3,728	10,167	28,470	56,940
HCA495 | 5" Coaxial	0.0839	833	2,292	6,253	17,509	35,019
HCA550 | 5-1/2" Coaxial	0.1380	506	1,394	3,801	10,645	21,290
HCA618 | 6-1/8" Coaxial	0.1840	380	1,045	2,851	7,984	15,968
HCA800 | 8" Coaxial	0.3250	215	591	1,614	4,520	9,040
HCA900 | 9" Coaxial	0.4320	161	445	1,214	3,400	6,801
1-5/8" Rigid Coaxial	0.0103	6,791	18,677	50,938	142,627	285,255
3-1/8" Rigid Coaxial	0.0405	1,727	4,750	12,954	36,273	72,546
4-1/16" Rigid Coaxial	0.0685	1,021	2,808	7,659	21,446	42,892
6-1/8" Rigid Coaxial	0.1580	442	1,217	3,320	9,297	18,595
7-3/16" Rigid Coaxial	0.2450	285	785	2,141	5,996	11,992
8-3/16" Rigid Coaxial	0.3200	218	601	1,639	4,590	9,181
9-3/16" Rigid Coaxial	0.3580	195	537	1,465	4,103	8,207
E 30 | Waveguide	0.0457	1,529	4,205	11,468	32,113	64,226
E 38 | Waveguide	0.0252	2,777	7,637	20,830	58,325	116,650
ES 46 | Waveguide	0.0170	4,113	11,311	30,850	86,380	172,760
E 46 | Waveguide	0.0181	3,868	10,638	29,013	81,238	162,477
E 58 | Waveguide	0.0116	6,017	16,548	45,132	126,371	252,742
E 60 | Waveguide	0.0110	6,371	17,522	47,787	133,804	267,609
E 65 | Waveguide	0.0089	7,830	21,533	58,726	164,434	328,869
E 70 | Waveguide	0.0078	9,026	24,822	67,698	189,556	379,113
E 78 | Waveguide	0.0065	10,831	29,787	81,238	227,468	454,936
E 100 | Waveguide	0.0041	17,102	47,032	128,271	359,160	718,320
E 105 | Waveguide	0.0033	20,964	57,653	157,236	440,261	880,522
E 130 | Waveguide	0.0026	27,079	74,468	203,096	568,670	1,137,341
E 150 | Waveguide	0.0019	36,106	99,291	270,795	758,227	1,516,454
E 185 | Waveguide	0.0012	59,082	162,477	443,119	1,240,735	2,481,471
E 220 | Waveguide	0.0009	81,238	223,406	609,289	1,706,011	3,412,023
E 250 | Waveguide	0.0006	108,318	297,875	812,386	2,274,682	4,549,364
E 380 | Waveguide	0.0003	216,636	595,750	1,624,773	4,549,364	9,098,729

Dehydrator Capacity Chart in Imperial Units

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Dehydrator Sizing Chart	Model	BD210W Series	BD550W Series	BD1500W Series	BD4200W Series	BD8400W Series
Altitude (meters)	Max Flow (SCMM)	0.0040	0.0108	0.0295	0.0826	0.1653
Sea Level	Max Flow (SCMD)	5.7	15.6	42.5	119	238
1.00	Max Volume (m^3)	1.993	5.455	14.863	41.615	83.230
	Max Volume (cm^3)	1,993,335	5,455,443	14,862,584	41,615,235	83,230,470
	Max Volume (l)	1,993	5,455	14,863	41,615	83,230
	Cross Area (l/m)	Estimated Max Length of Line (m)				
HCA38 | 3/8" Coaxial	0.107	18,657	51,062	139,112	389,514	779,029
HCA12 | 1/2" Coaxial	0.134	14,900	40,779	111,096	311,070	622,141
HCA58 | 5/8" Coaxial	0.253	7,888	21,588	58,815	164,684	329,369
HCA78 | 7/8" Coaxial	0.447	4,460	12,208	33,259	93,127	186,254
HCA118 | 1-1/8" Coaxial	0.753	2,648	7,249	19,750	55,301	110,603
HCA158 | 1-5/8" Coaxial	1.431	1,393	3,813	10,388	29,087	58,174
HCA214 | 2-1/4" Coaxial	2.109	945	2,586	7,047	19,733	39,466
HCA300 | 3" Coaxial	3.447	578	1,582	4,312	12,073	24,147
HCA400 | 4" Coaxial	4.794	415	1,138	3,100	8,681	17,362
HCA495 | 5" Coaxial	7.795	255	699	1,906	5,339	10,678
HCA550 | 5-1/2" Coaxial	12.821	155	425	1,159	3,245	6,491
HCA618 | 6-1/8" Coaxial	17.094	116	319	869	2,434	4,868
HCA800 | 8" Coaxial	30.194	66	180	492	1,378	2,756
HCA900 | 9" Coaxial	40.134	49	135	370	1,036	2,073
1-5/8" Rigid Coaxial	0.957	2,083	5,701	15,531	43,489	86,979
3-1/8" Rigid Coaxial	3.763	529	1,449	3,950	11,060	22,120
4-1/16" Rigid Coaxial	6.364	313	857	2,335	6,539	13,078
6-1/8" Rigid Coaxial	14.679	135	371	1,012	2,835	5,670
7-3/16" Rigid Coaxial	22.761	87	239	652	1,828	3,656
8-3/16" Rigid Coaxial	29.729	67	183	499	1,399	2,799
9-3/16" Rigid Coaxial	33.259	59	164	446	1,251	2,502
E 30 | Waveguide	4.250	469	1,283	3,497	9,791	19,583
E 38 | Waveguide	2.340	851	2,331	6,351	17,784	35,568
ES 46 | Waveguide	1.580	1,261	3,452	9,406	26,338	52,677
E 46 | Waveguide	1.680	1,186	3,247	8,846	24,770	49,541
E 58 | Waveguide	1.080	1,845	5,051	13,761	38,532	77,065
E 60 | Waveguide	1.020	1,954	5,348	14,571	40,799	81,598
E 65 | Waveguide	0.830	2,401	6,572	17,906	50,138	100,277
E 70 | Waveguide	0.720	2,768	7,577	20,642	57,798	115,597
E 78 | Waveguide	0.600	3,322	9,092	24,770	69,358	138,717
E 100 | Waveguide	0.380	5,245	14,356	39,112	109,513	219,027
E 105 | Waveguide	0.310	6,430	17,598	47,943	134,242	268,485
E 130 | Waveguide	0.240	8,305	22,731	61,927	173,396	346,793
E 150 | Waveguide	0.180	11,074	30,308	82,569	231,195	462,391
E 185 | Waveguide	0.110	18,121	49,594	135,114	378,320	756,640
E 220 | Waveguide	0.080	24,916	68,193	185,782	520,190	1,040,380
E 250 | Waveguide	0.060	33,222	90,924	247,709	693,587	1,387,174
E 380 | Waveguide	0.030	66,444	181,848	495,419	1,387,174	2,774,349

Dehydrator Capacity Chart in Metric Units

External Doucment Links

BD4200W Series User Guide

Dehydrator Start-up Kits and Accessory Datasheet

Dehydrator Sizing Reference Guide

BD210WLP Series Datasheets

BD550W Series Datasheets

BD1500W Series Datasheets

BD8400W Series Datasheets

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